FIG. 1

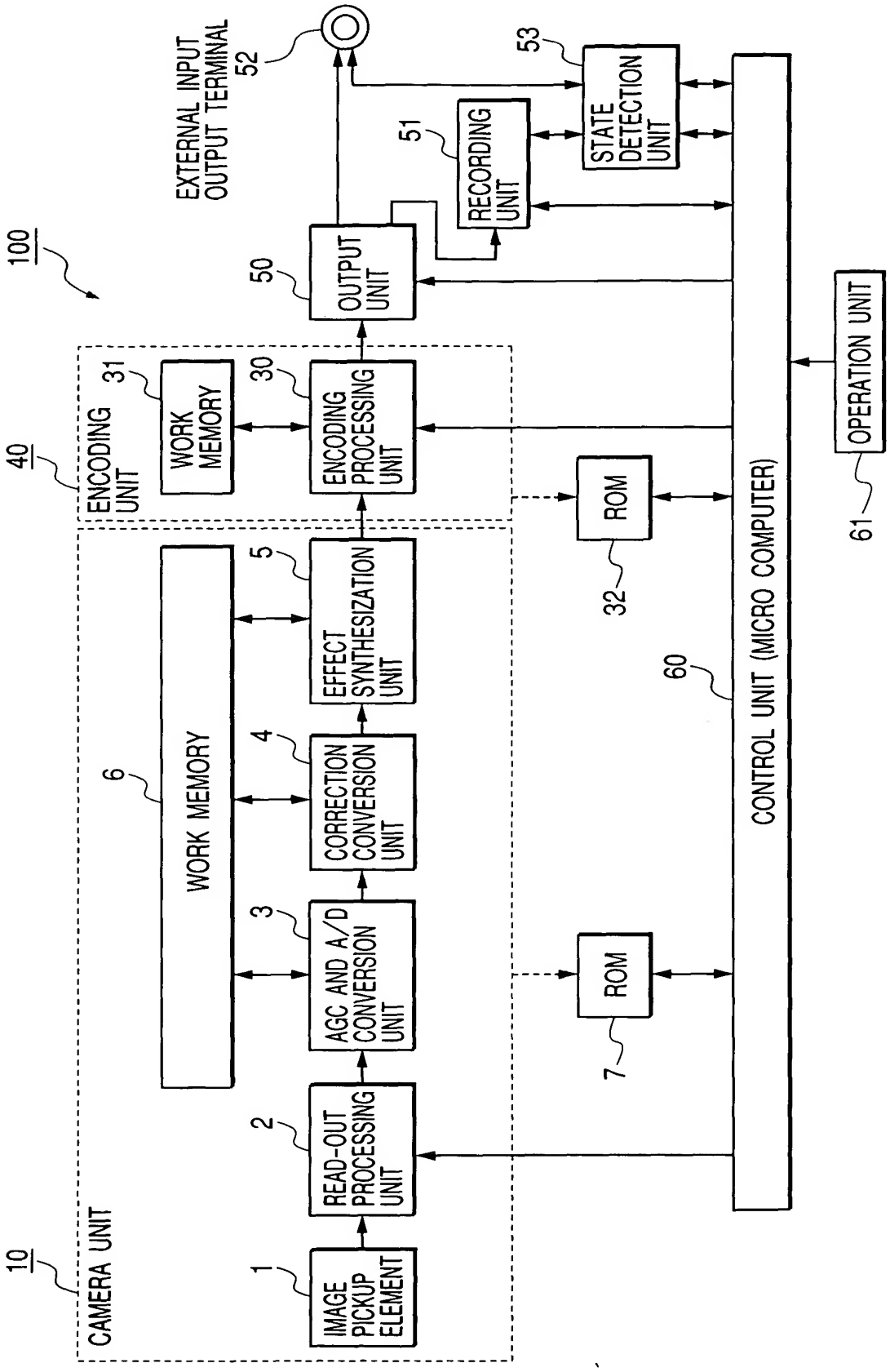

100
10
CAMERA UNIT
IMAGE PICKUP ELEMENT
1
READ-OUT PROCESSING UNIT
2
AGC AND A/D CONVERSION UNIT
3
CORRECTION CONVERSION UNIT
4
EFFECT SYNTHESIZATION UNIT
5
WORK MEMORY
6
ROM
7
40
ENCODING UNIT
WORK MEMORY
31
ENCODING PROCESSING UNIT
30
ROM
32
OUTPUT UNIT
50
EXTERNAL INPUT OUTPUT TERMINAL
52
RECORDING UNIT
51
STATE DETECTION UNIT
53
CONTROL UNIT (MICRO COMPUTER)
60
OPERATION UNIT
61

FIG. 2

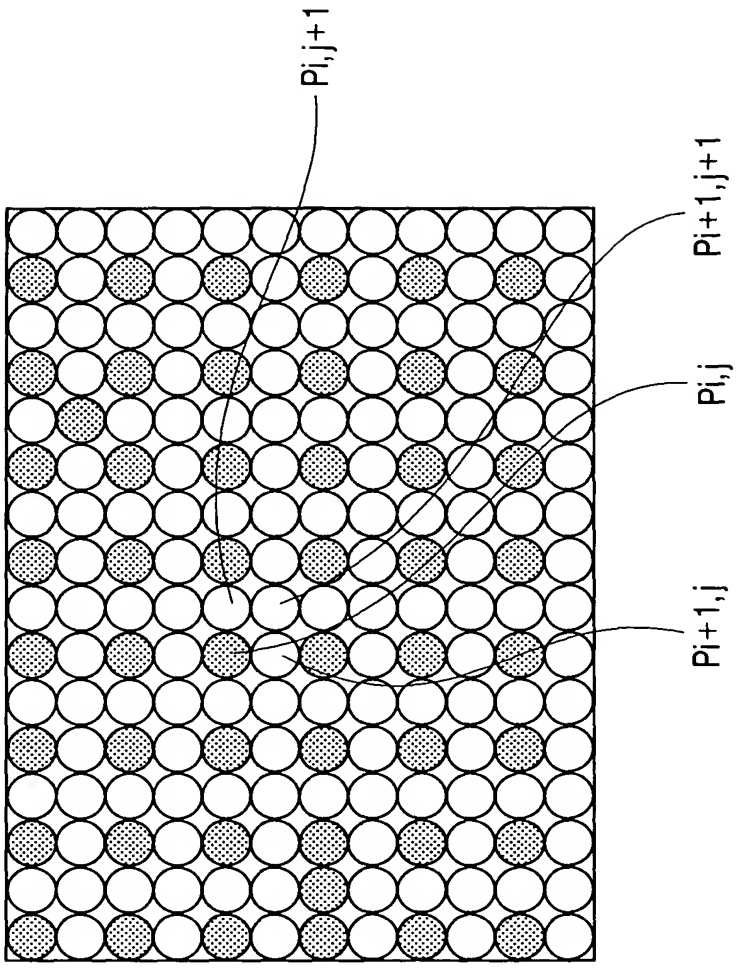


FIG. 3

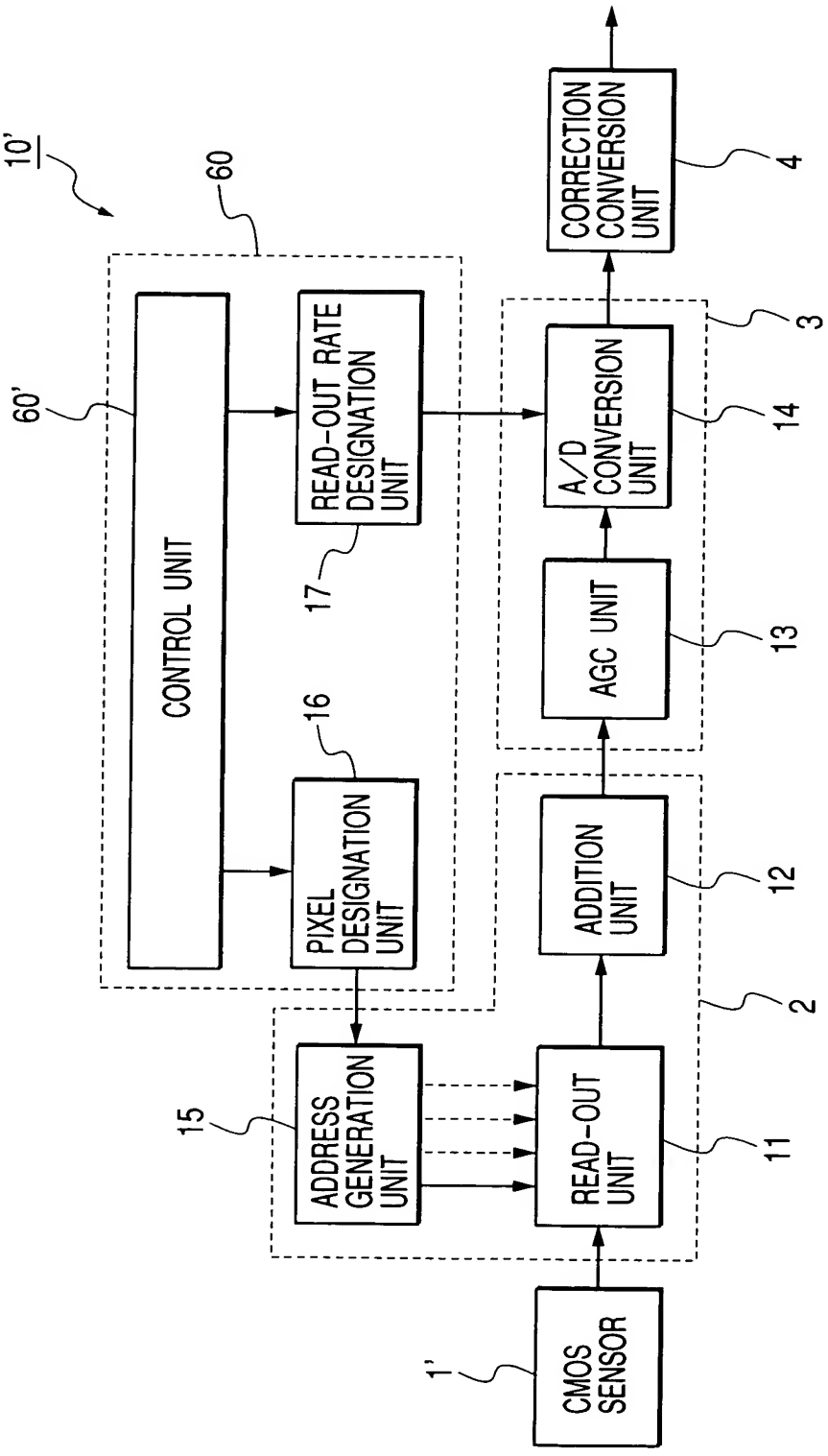

10'
60
60'
CONTROL UNIT
READ-OUT RATE DESIGNATION UNIT
17
PIXEL DESIGNATION UNIT
16
ADDRESS GENERATION UNIT
15
READ-OUT UNIT
11
ADDITION UNIT
12
AGC UNIT
13
A/D CONVERSION UNIT
14
CORRECTION CONVERSION UNIT
4
CMOS SENSOR
1'
2
3

FIG. 4A

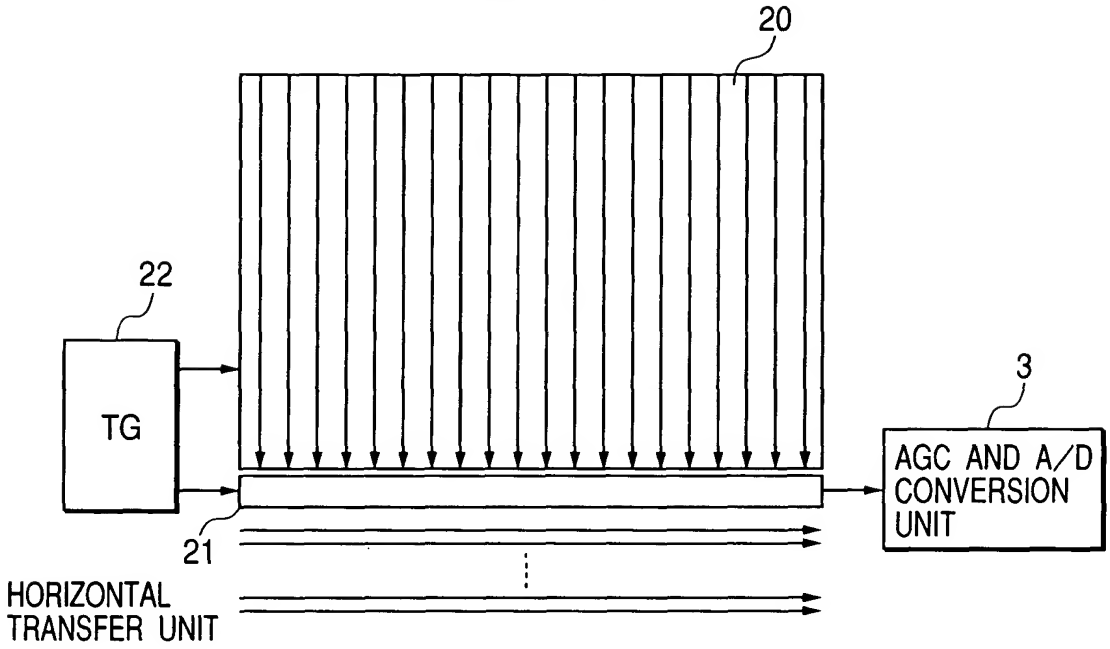
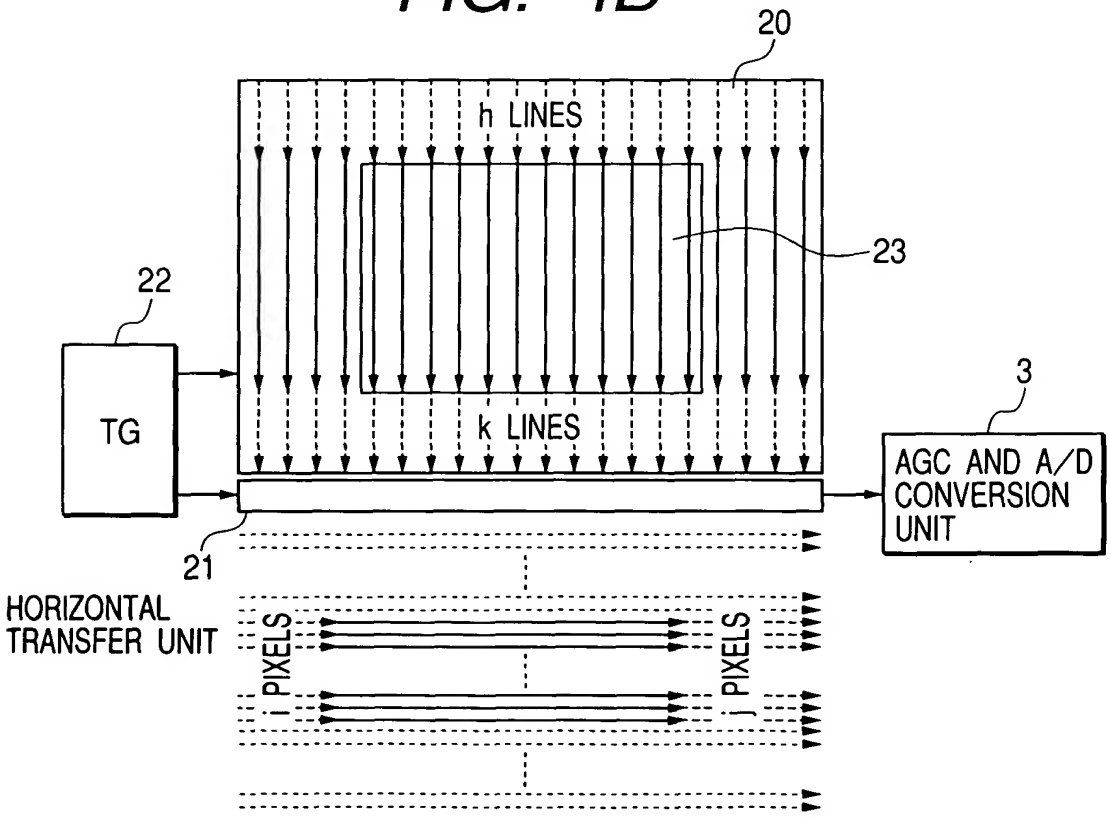

20
22
TG
3
AGC AND A/D CONVERSION UNIT
21
HORIZONTAL TRANSFER UNIT

FIG. 4B


20
h LINES
23
22
TG
k LINES
3
AGC AND A/D CONVERSION UNIT
21
HORIZONTAL TRANSFER UNIT
i PIXELS
j PIXELS

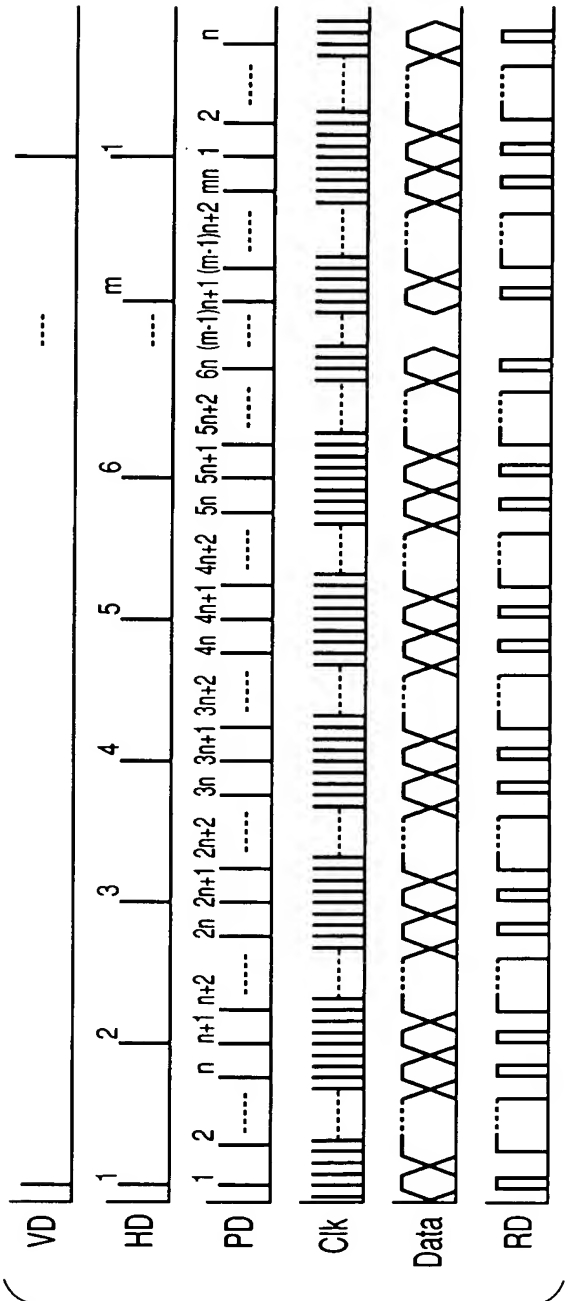


FIG. 5A

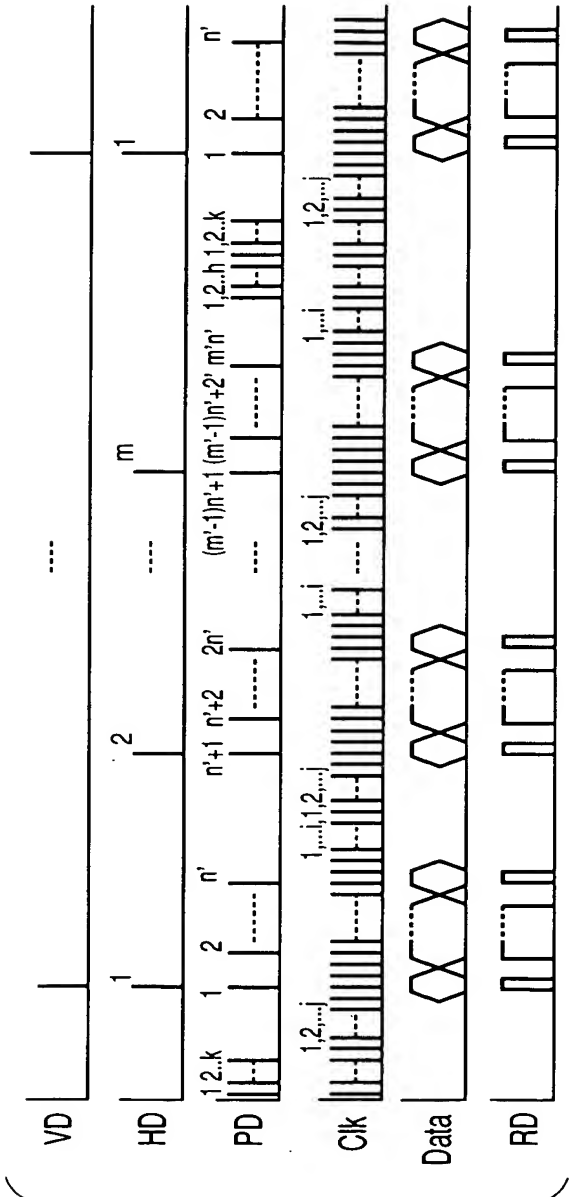


FIG. 5B

FIG. 6

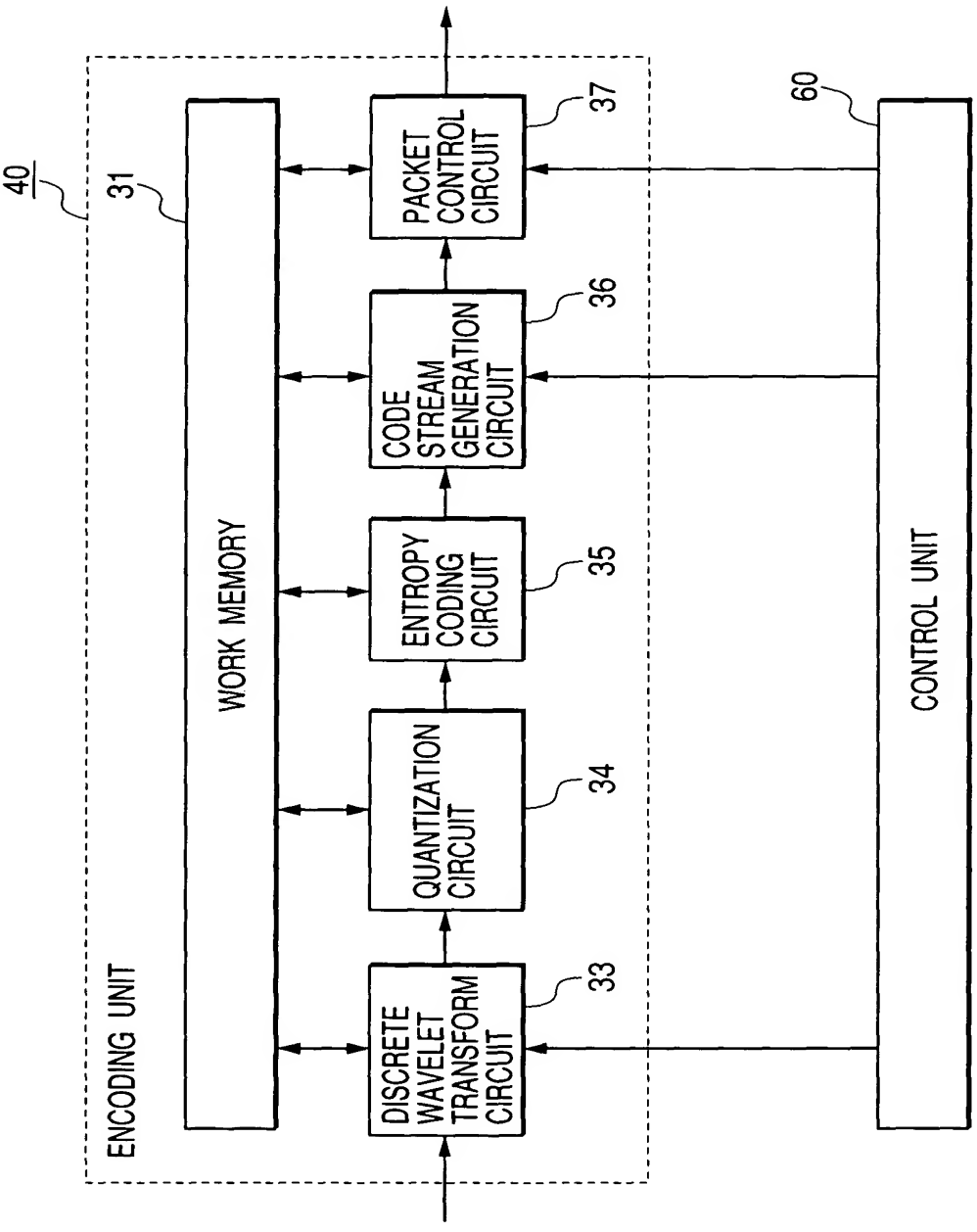

40
ENCODING UNIT
31
WORK MEMORY
DISCRETE WAVELET TRANSFORM CIRCUIT
33
QUANTIZATION CIRCUIT
34
ENTROPY CODING CIRCUIT
35
CODE STREAM GENERATION CIRCUIT
36
PACKET CONTROL CIRCUIT
37
60
CONTROL UNIT

FIG. 7

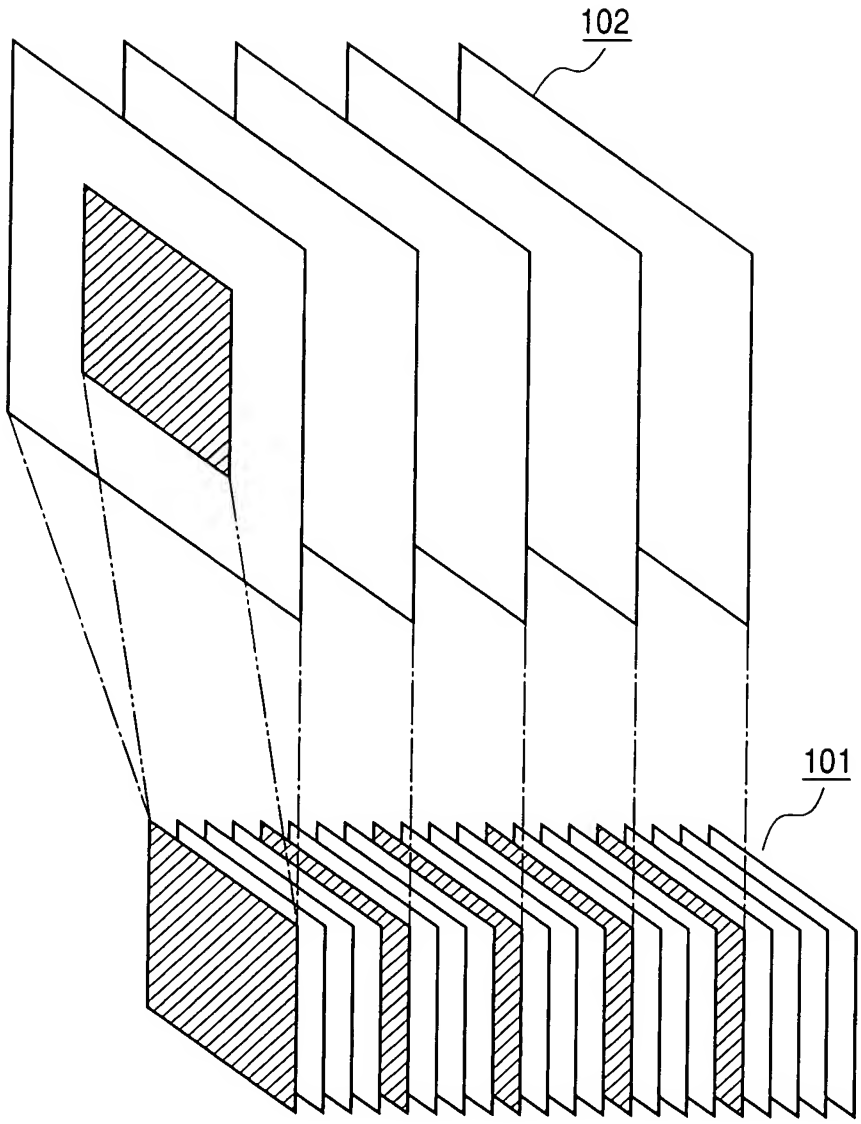


FIG. 8

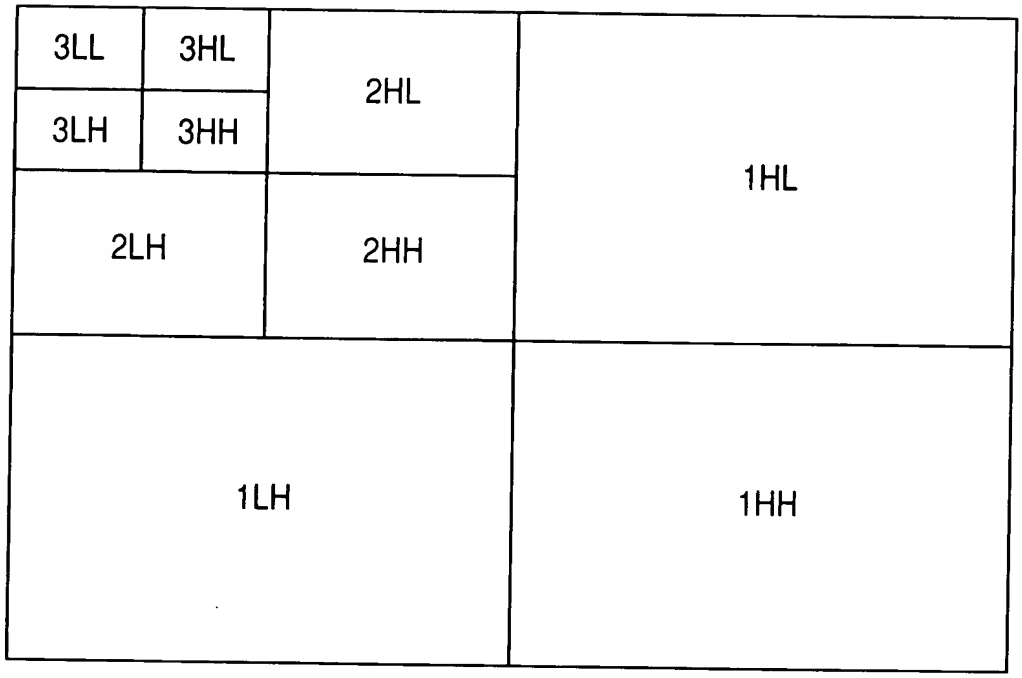


FIG. 9

	LENGTH×WIDTH=TOTAL NUMBER (P) OF PIXELS	RATE (1/T)
QXGA	2048×1536=3,150,000	1/2.9
UXGA	1600×1200=1,920,000	1/4.8
SXVGA	1280×960=1,230,000	1/7.5
XGA	1024×768=790,000	1/11.7
SVGA	800×600=480,000	1/19.2
VGA	640×480=310,000	1/30.0
QVGA	320×240=80,000	1/120.0

FIG. 10

FIG. 10A

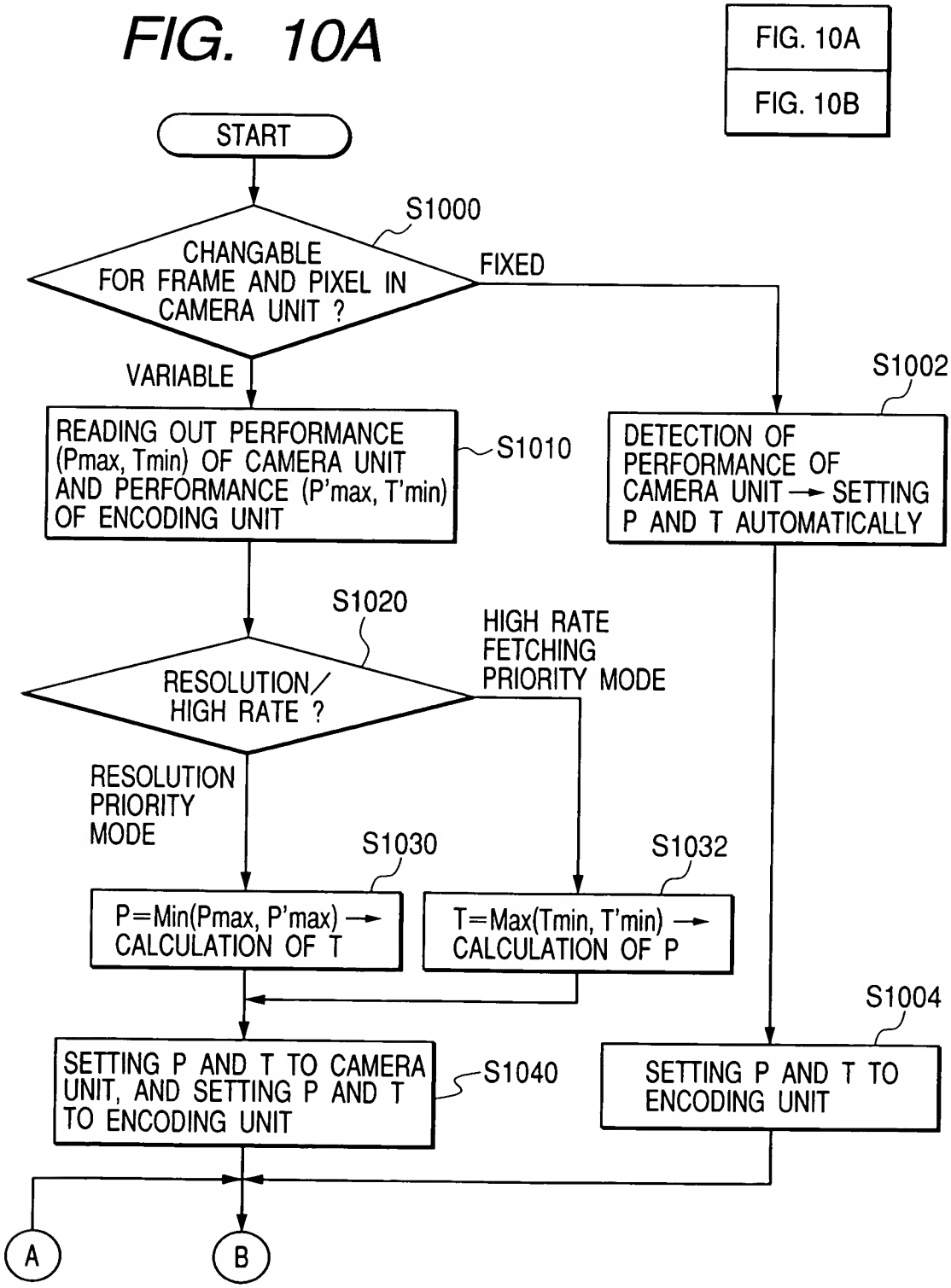
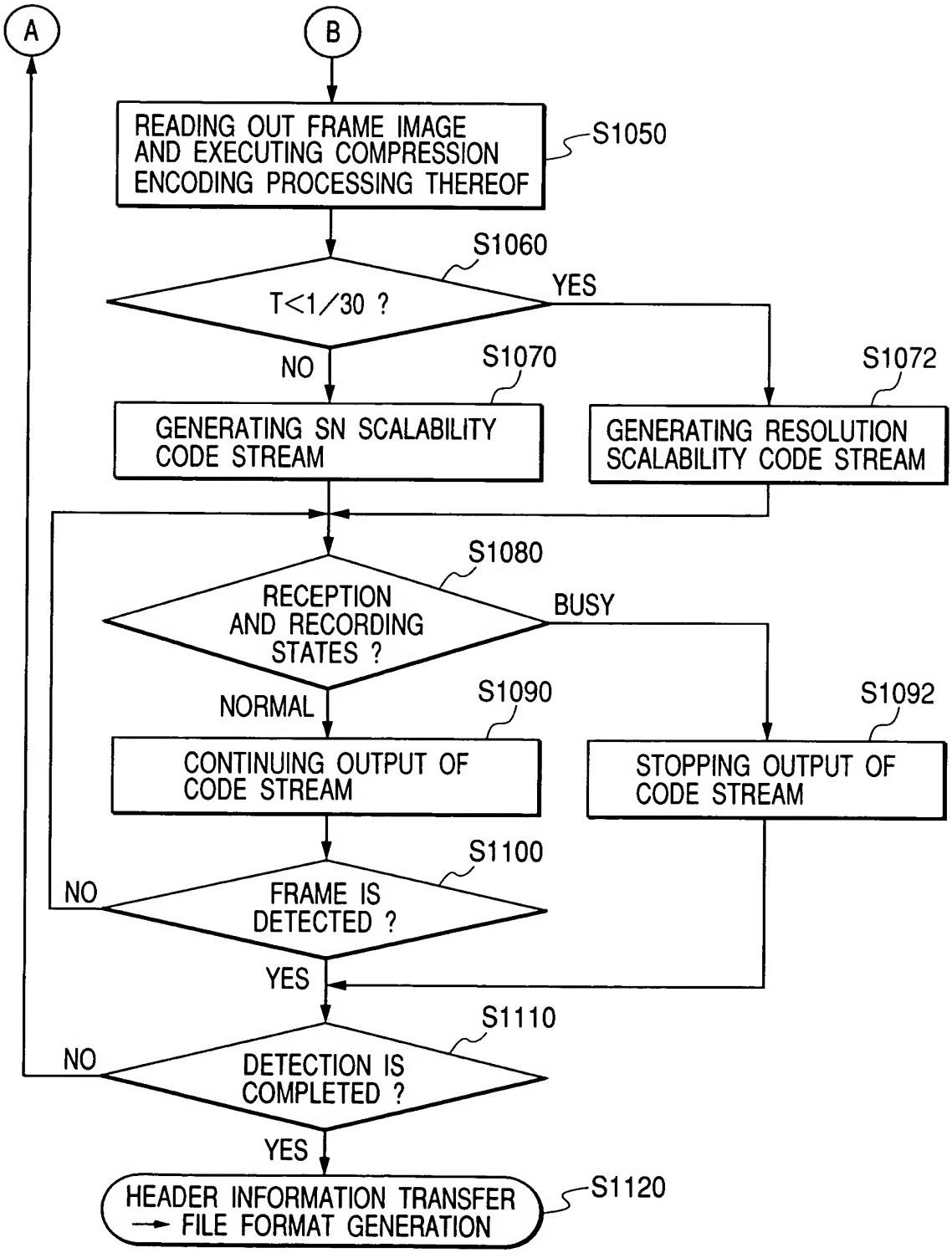


FIG. 10B


A
B
READING OUT FRAME IMAGE AND EXECUTING COMPRESSION ENCODING PROCESSING THEREOF
S1050
S1060
T<1/30 ?
YES
NO
S1070
GENERATING SN SCALABILITY CODE STREAM
S1072
GENERATING RESOLUTION SCALABILITY CODE STREAM
S1080
RECEPTION AND RECORDING STATES ?
BUSY
NORMAL
S1090
CONTINUING OUTPUT OF CODE STREAM
S1092
STOPPING OUTPUT OF CODE STREAM
S1100
NO
FRAME IS DETECTED ?
YES
S1110
NO
DETECTION IS COMPLETED ?
YES
HEADER INFORMATION TRANSFER → FILE FORMAT GENERATION
S1120